

Serial No. 09/746,563

**SINGLE SENSOR VIDEO CAMERA TECHNIQUE  
WITH DIAGONALLY COUPLED PIXELS**

**ABSTRACT**

A method for producing electronic video signals representative of color images of a scene, includes the following steps: providing a sensor having a color filter thereover; providing a motion picture film camera type of lens system that focuses light from the image onto the color filter and sensor; and producing electronic video signals from the output of the sensor; the sensor including a sensor array having alternate lines offset by half a pixel spacing, and diagonally coupled pixels on successive lines, and the color filter having repeating R, G, and B patterns offset on successive lines so that R pixels are arranged diagonally, G pixels are arranged diagonally, and B pixels are arranged diagonally.